Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE RUSTS OF GUATEMALA—II*

FRANK D. KERN

The first article of this series was published in 1907 in the Journal of Mycology, vol. 13, pp. 18–26. The general introductory remarks used there apply equally well to the present paper but since a considerable time has intervened it may be well at this time to again call attention to the principal points. The specimens upon which both papers have been based were collected in Guatemala by the late Professor W. A. Kellerman (except one specimen by Professor Wm. Trelease) and placed in the hands of the writer for identification and study. Professor Kellerman made in all four excursions for the collection and study of the Guatemalan flora. So rich were his collections of the rusts, however, that specimens secured during the first two excursions (with one or two exceptions) have sufficed for both this and the earlier report and there still remains a number which have not yet been determined.

RAVENELIA MIMOSAE-ALBIDAE Dietel.—— On *Mimosa albida floribunda* Rab. (host no. 5222, det. by B. L. Robinson), Antigua, Depart. Sacatepéquez, Feb. 18, 1905, no. *5360*.

CIONOTHRIX PRAELONGA (Winter) Arth.—On *Eupatorium populifolium* H.B.K. (host det. by J. M. Greenman), Los Amates, Depart. Izabal, alt. 90 m., March 15, 1905, nos. *5301*, *5302*.

CALLIOSPORA DIPHYSAE Arth.—On *Diphysa* sp., Palmar, Depart. Quezaltenango, Feb. 11, 1906, no. *5459*.

A little known but characteristic species hitherto known only from the type locality, Rio Blanco, Guadalajara, Mexico.

PUCCINIA GREGARIA Kunze.—On *Xylopia* sp., Los Amates, Depart. Izabal, alt. 90 m., March 15, 1905, no. *5330*.

A very interesting species because of the odd characters of the teliospores. The apex of the upper cell and the base of the lower cell have the wall thickened and over these areas the spinulose papillae are much longer than on the sides. The species has also been called *Dasyspora faveolata* by Berkeley and Curtis and is the type of their genus *Dasyspora,* which has been maintained by Arthur to include the *Puccinia*-like species which possess only pycnia and telia in their life-cycle. The Guatemalan specimen has pycnia accompanying the telia.

---

* Contributions to Guatemalan Mycology—V. (The first three papers in this series were by W. A. Kellerman, the fourth by the writer.)

PUCCINIA LIPPIAE Speg.—On *Lippia myriocephala* Cham. & Schlecht. (host no. 5209, det. by John Donnell Smith), Laguna, Depart. Amatitlan, alt. 1200 m., Jan. 20, 1906, no. *5451* (in part).

The teliospores of this species are also very unusual on account of the whorls of branched appendages near the base of the pedicels.

PUCCINIA POLYGONI-AMPHIBII Pers.—On *Polygonum* sp., Laguna, Depart. Amatitlan, Jan. 25, 1906, no. *5392*.

PUCCINIA INANIPES Diet. & Holw.—On *Eupatorium tubiflorum* Benth. (host no. 5195, det. by J. M. Greenman), Volcano Atitlan, Depart. Solalá, Feb. 16, 1906, no. *5314*.

PUCCINIA ELEOCHARIDIS Arth.—On *Eleocharis* sp., Palmar, Depart. Quezaltenango, Feb. 11, 1906, no. *5419*.

UROMYCES APPENDICULATUS (Pers.) Fries.—On *Phaseolus atropurpurea* Moc. (host no. 4797), Laguna, Depart. Amatitlan, alt. 1200 m., Feb. 5, 1905, no. *5373*.

The host has been examined by J. K. Small, who is somewhat doubtful about the specific determination owing to its fragmentary condition.

UROMYCES LEPTODERMIS Sydow.—On *Panicum barbinode* Trin. (host det. by A. S. Hitchcock), Laguna, Depart. Amatitlan, alt. 1200 m., Feb. 5, 1905, no. *5364*.

UROMYCES PROËMINENS (DC.) Pass.—On *Euphorbia lasiocarpa* Klotzsch. (host det. by C. F. Millspaugh), Laguna, Depart. Amatitlan, alt. 1200 m., Jan. 17, 1906, no.*5404; E. adenoptera* Bertol, Los Amates, Depart. Izabal, alt. 90 m., Jan. 5, 1908, no. *7036*.

UROMYCES RUBI Diet. & Holw.—On *Rubus glaucus* Benth., Guatemala, Depart. Guatemala, alt. 1465 m., Feb. 12, 1905, no. *4625;* Antigua, Depart. Sacatepéquez, Feb. 18, 1905, nos. *5319, 5320, 5321; Rubus poliophyllus* Focke (host no. 4775), Antigua, Feb. 18, 1905, no. *5363;* Volcano Atitlán, Depart. Sololá, Feb. 16, 1906, no. *5415*.

Nos. *4625* and *5363* were erroneously reported in the first article (Jour. Myc. **13**: 20) as *Kuehneola albida.* It was noted there that the markings of the urediniospores of no. *5363* are much coarser than is typical in that species. This coarse spinosely-echinulate surface is characteristic of *U. Rubi.* The host of no. *5363* was determined by John Donnell Smith, all the others have been determined by P. A. Rydberg with an indication of some uncertainty in nos. *4625* and *5319*.

Uromyces Gouaniae sp. nov.—Pycnia and aecia unknown.

Uredinia hypophyllous, scattered, small, inconspicuous, punctiform, roundish, chestnut-brown; paraphyses encircling the sori, clavate or cylindrical, 10–16 × 30–40 μ, somewhat incurved, the wall colorless, thin, about 1 μ; urediniospores obovoid or broadly ellipsoid, 18–19 × 21–26 μ, the wall light cinnamon-brown, 1.5–2 μ thick, evenly and sparsely echinulate; pores 2, occasionally 3, superequatorial.

Telia resembling the uredinia, slightly darker; teliospores broadly ellipsoid or ovoid, 18–23 × 26–29 μ, the wall chestnut-brown, with a slightly paler umbo, moderately thick, 2–2.5 μ, thicker above, 4–5 μ, evenly and moderately verrucose; pedicel tinted, once to twice length of spore.

On *Gouania domingensis* L., Laguna, Depart. Amatitlan, alt. 1200 m., Jan. 25, 1906, no. *5391*.

There is no other species of *Uromyces* known on this or any closely related host. The general characters of this species are paralleled in a very interesting manner by *Puccinia Gouaniae* Holw., the important difference between the two being the number of cells in the teliospores. *Uredo Gouaniae* Ellis & Kelsey is doubtless the uredinial stage of *Puccinia Gouaniae* Holw. The host of the Guatemalan specimen has been determined by J. N. Rose.

AECIDIUM LORANTHI Thüm.—On *Loranthus* sp., Guatemala, Depart. unknown, Feb. 27, 1902, *Wm. Trelease.*

UREDO MALVICOLA Speg.—On *Malvaviscus* (host no. 5238), Mazatenango, Depart. Suchitepéquez, alt. 330 m., Feb. 28, 1905, no. *5375*.

The host of this collection has been examined by J. N. Rose, who suggested this determination with some doubt owing to the very fragmentary condition of the specimen.

PURDUE UNIVERSITY,
LAFAYETTE, INDIANA.